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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|------------------------------------|-------------|----------------------|---------------------|------------------|
| 10/774,366 | 02/10/2004 | Kejun Kang | 032364-010 | 9527 |
| 21839 | 7590 | 10/06/2004 | EXAMINER | |
| BURNS DOANE SWECKER & MATHIS L L P | | | SONG, HOON K | |
| POST OFFICE BOX 1404 | | | ART UNIT | |
| ALEXANDRIA, VA 22313-1404 | | | PAPER NUMBER | |
| | | | 2882 | |

DATE MAILED: 10/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|-----------------|--------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/774,366 | KANG ET AL. | |
| | Examiner | Art Unit | |
| | Hoon Song | 2882 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 7-9 is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 February 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "inspection system having scanning tunnel with a transition means as required by claim 7 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

Claim 8 is objected to because of the following informalities:

In claim 8 on line 2, "a floor" should read the --the floor--.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krug et al. (US 5838758) in view of Jensen (US 5331118).

Regarding claim 1, Krug teaches an inspection system, in which an accelerator (1), a collimator (3) and a vertical detector arm (vertical panel, 8) are all mounted on a floor;

detectors (6a, 6b) are provided within both a horizontal detector arm and the vertical detector arm;

the accelerator (1), the collimator (3), the horizontal detector arm (horizontal panel, 8) and the vertical detector arm (vertical panel, 8) are provided in a same plane (figure 2);

the horizontal detector arm (8) is supported by an upper end of the collimator (3) (figure 2);

the vertical detector arm (8) and the horizontal detector arm (8) are connected to each other and provided in the side opposite to the accelerator (figure 2);

a stable portal-shaped frame (housing, 8) is formed by means of the collimator (3), the horizontal detector arm (8) and the vertical detector arm (8);

a conveying device (5) is located under the horizontal detector arm (8), being perpendicular to the portal-shaped frame, the collimator (3) is provided between the conveying device (5) and the accelerator (1) and

a scanning tunnel (tunnel) is enclosed by the portal-shaped frame and the conveying device (figure 2), wherein

the conveying device is composed of a chain-plank conveyor (345).

However Krug fails to teach roller conveyers which one of the roller conveyers is respectively provided at each of the two ends of the chain-plank conveyor, and an idle transition roll is used to smoothly bridge the roller conveyers and the chain-plank conveyor.

Jenson teaches roller conveyor (30) which is respectively provided end of the chain-plank conveyor (10), and an idle transition roll (a roll which close to the conveyor) which is used to smoothly bridge the roller conveyers and the chain-plank conveyor.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the inspection system of Krug with the roller conveyers at each end of the conveyor, since the additional conveyers would further extend the conveying path so that it would be easier to handle the inspecting objects.

Regarding claim 2, Krug teaches the accelerator, the collimator and the vertical detector arm are respectively provided with an accelerator base (lower portion of the

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accelerator), a collimator base (lower portion of the collimator) and a vertical detector arm base (lower portion of the vertical detector arm).

Regarding claim 3, Krug teaches radiation shielding walls are provided on both sides of the scanning tunnel (figure 1).

Regarding claim 6, Krug teaches an inspection system, in which an accelerator (1), a collimator (3) and a vertical detector arm (vertical panel, 8) are all mounted on a floor;

detectors (6a, 6b) are provided within both a horizontal detector arm and the vertical detector arm;

the accelerator (1), the collimator (3), the horizontal detector arm (horizontal panel, 8) and the vertical detector arm (vertical panel, 8) are provided in a same plane (figure 2);

the horizontal detector arm (8) is supported by an upper end of the collimator (3) (figure 2);

the vertical detector arm (8) and the horizontal detector arm (8) are connected to each other and provided in the side opposite to the accelerator (figure 2);

a stable portal-shaped frame (housing, 8) is formed by means of the collimator (3), the horizontal detector arm (8) and the vertical detector arm (8);

a conveying device (5) is located under the horizontal detector arm (8), being perpendicular to the portal-shaped frame, the collimator (3) is provided between the conveying device (5) and the accelerator (1) and

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a scanning tunnel (tunnel) is enclosed by the portal-shaped frame and the conveying device (figure 2), wherein the conveying device is a roller conveyor,

however Krug fails to teach a idler roller.

Jensen teaches a container carrying surface of which is in the same level as that of an idle roller trailer (a roller which close to the conveyer), and a roller conveyor.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the inspection system of Krug with the idle roller, since the idle roller would further extend the conveying path so that it would be easier to handle the inspecting objects.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Krug as modified by Jensen as applied to claim 1 above, and further in view of Ellenbogen (US 6218943B1).

Regarding claim 4, Krug teaches the inspection system further comprises an instrument cabin (9), the instrument cabin is provided outside of the radiation shielding wall (8) with respect to the scanning tunnel, the instrument cabin is provided with a scanning control module (computer), an image data acquisition module and an operation and inspection module.

However Krug fails to teach a workroom with a consol.

Ellenbogen teaches a workroom with a consol (i.e. a suspect baggage search area with a computer).

It would have been obvious to one of ordinary skill in the art at the time of the invention to provide inspection system of Krug as modified by Jensen with the search

area as taught by Ellenbogen, since the search area of Ellenbogen would provide privacy and safe control of searching the suspected baggage.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Krug as modified by Jensen as applied to claim 1 above, and further in view of Krug et al. (US 5974111).

Regarding claim 5, Krug as modified by Jensen fails to an electrical sensor alarming element is provided at each end of the scanning tunnel.

Krug ('111) teaches a photocell sensor (32, 34) provided at each end of a scanning tunnel.

It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the inspection system of Krug ('758) as modified by Jensen with sensors as taught by Krug ('111), since the sensor of Krug ('111) would provide better safety in operating the inspection system.

Allowable Subject Matter

Claims 7-9 are allowed over prior art.

Regarding claim 7, the prior art fails to teach a stable portal-shaped frame which is formed by means of a collimator, the horizontal detector arm and the vertical detector arm, a conveying device which is located under the horizontal detector arm, being perpendicular to the portal-shaped frame, a scanning tunnel which is enclosed by the portal-shaped frame and the conveying device, and at both ends of the chain-plank conveyor, there is each provided with a transition means which facilitates vehicles to go

up to the chain-plank conveyor from the air cargo conveying line or go down to the air cargo conveying line from the chain-plank conveyor as claimed in independent claim 7.

Conclusion

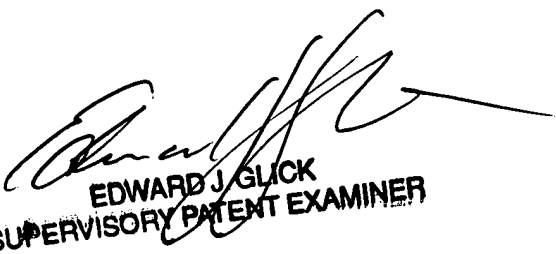
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hoon Song whose telephone number is (571) 272-2494. The examiner can normally be reached on 8:30 AM - 5 PM, Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Glick can be reached on (571) 272 - 2490. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

HKS

9/30/04
HKS


EDWARD J. GLICK
SUPERVISORY PATENT EXAMINER